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Sanborn, Head & Associates

Consulting Engineers & Scientists

GROUNDWATER/SURFACE WATER SAMPLING AND ANALYSIS

Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Prepared for
New Hampshire Department of Environmental Services

Prepared by
Sanborn, Head & Associates, Inc.

File 1143.1
January 1996

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SHA
Sanborn, Head & Associates
Consulting Engineers & Scientists

January 17, 1996
File No. 1143.1

Robert P. Minicucci, II, P.E.
Project Manager
Groundwater Protection Bureau
Water Supply and Pollution Control Division
New Hampshire Department of Environmental Services
P.O. Box 95, 6 Hazen Drive
Concord, NH 03302-0095

Re: Additional Environmental Services
Groundwater/Surface Water Sampling And Analysis
Beede Waste Oil/Cash Energy Site
Plaistow, New Hampshire

Dear Mr. Minicucci:

This report presents the results of water quality monitoring activities completed by Sanborn, Head & Associates, Inc. (SHA) at the Beede Waste Oil/Cash Energy site (Site) in Plaistow, New Hampshire, on behalf of the New Hampshire Department of Environmental Services (NHDES). These activities were completed pursuant to the workplan entitled "Cost Proposal And Workplan For Additional Environmental Services" prepared by SHA and dated October 26, 1995, and Amendment No. 2 of our agreement with the NHDES executed by the Governor and Council on December 6, 1995. This report summarizes the activities and findings of the first of two proposed rounds of water quality sampling and analysis.

WORK COMPLETED

SHA completed the sampling of groundwater and surface water between December 13 and 19, 1995. Groundwater levels were measured and samples were collected from 29 wells, including 26 on-site monitoring wells, the on-site dug well, and two off-site private supply wells (Howard Manor Condominium and Howard Residence overburden wells). Groundwater samples were submitted to Eastern Analytical Inc. (EAI) of Concord, New Hampshire for volatile organic compound (VOC) analysis using EPA Method 8260, and polychlorinated biphenyls (PCB) analysis using EPA Method 8080. Surface water samples were collected at six locations along Kelley Brook and submitted to EAI for VOC analysis using EPA Method 8260. At the time of sampling, Kelley Brook was frozen at five of the sampling locations, and samples were obtained from below the ice. Product and

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groundwater levels were measured in ten on-site monitoring wells; pursuant to the workplan, no samples were collected from these product-containing wells (i.e. >0.01 foot of product). A site plan is provided as Figure 1. Groundwater and surface water collection, sample handling and preservation, field screening for pH and specific conductance, and quality assurance/quality control procedures were completed in general accordance with 3.5.2 of the Project Operations Plan prepared by SHA and dated May 1995.

FINDINGS

Groundwater/Product Levels

Compared to groundwater levels measured on June 13, 1995, groundwater levels have risen approximately 0.3 feet on average, with a standard deviation of approximately 0.2 feet. The relatively low standard deviation indicates that the increase in groundwater elevation is relatively uniform across the Site and that the current groundwater flow direction is generally similar to that estimated for the June 13, 1995 groundwater level data.

Based on the June 13, 1995 groundwater elevations, the direction of groundwater flow at the water table (shallow) beneath Parcel 1 ranges from east to northeast and exhibits a slight convergence towards the center of the site. On Parcel 2, the shallow groundwater flow directions are toward Kelley Brook and hence exhibit a divergence of flow ranging from northeast to north in the north, to southeast in the east and off-site to the south. Horizontal groundwater flow directions evaluated from wells screened in the lower fine sand and till units are generally similar to those at the water table. This condition indicates a relatively high degree of hydraulic communication throughout the overburden aquifer.

The average apparent product thickness observed in monitoring wells declined approximately 0.4 feet, from 2.4 to 2.0 feet. In addition, no measurable product was detected in monitoring well AE-4, which had 0.21 feet of product in June 1995. This trend is consistent with an increase in the volume of residual product present below the water table caused by the smearing effect of rising groundwater. Exceptions to this trend are increases in the product thickness measured in monitoring wells SH-6 (0.80 ft) and AE-8 (0.73 ft.), and the presence of approximately 0.18 feet of product in monitoring well AE-5. Groundwater elevation data are summarized in Table 1 and in the field forms in Appendix A.

Due to the presence of ice along the majority of Kelley Brook and the potential for disturbance of staff gauges, a surface water elevation was obtained only at SW-8 located near where Kelley Brook flows under Route 125 southeast of the site. At this location the elevation of Kelley Brook was 102.11 USGS, which is approximately 0.23 feet higher than the elevation determined in June 1995; this elevation is consistent with the increase in Site groundwater elevations observed in December 1995.

Water Quality Results

In general, the observed concentrations, spatial distribution, and types of VOCs detected in groundwater and surface water are consistent with the analytical results of the June 1995 water quality monitoring round. The present findings do not suggest any substantial change in the size, shape, or location of the contaminant plumes discussed in the Site and Waste Characterization report prepared by SHA and dated September 1995. The observed changes in VOC concentrations are interpreted to be related to seasonal fluctuations in hydrogeologic conditions and consistent with the hydrogeologic/contaminant transport model developed by SHA for the site and presented in the Site and Waste Characterization Report. In addition, the analytical data from the recent sampling round do not indicate the discovery of additional contamination sources. The analytical results from the June and December monitoring rounds are compared below.

Little or no change in the concentrations of VOCs was observed in samples collected from 13 monitoring wells.

- All the monitoring wells (12) which previously yielded groundwater samples with no detected VOCs continued to do so (SH-1D, SH-2S, SH-2D, SH-4D, SH-11, SH-12, AE-10, AE-17S, AE-20, AE-21, AE-22, and MW-4).

- The concentrations of chlorinated VOCs (CVOCs) in groundwater from monitoring well AE-14 were similar in both rounds (no non-chlorinated aromatic VOCs [AVOCs] were detected).

A general decrease in VOC concentrations from the June to the December monitoring rounds was observed in groundwater from nine monitoring wells.

- Groundwater from monitoring wells SH-8 and SH-9 exhibited a decrease in total CVOC concentrations by factors of approximately 1.2 and 1.9, respectively (no AVOCs were detected).

- A decrease in the total AVOC concentrations by factors of approximately 1.7 and 3 occurred in monitoring wells AE-2 and AE-4, respectively (no CVOCs were detected). The decrease in total AVOC concentrations in the sample from monitoring well AE-4 may be related to the absence of measurable product thickness in this well relative to the thickness observed in June (0.21 feet product).

- Groundwater samples from monitoring wells AE-11D and AE-12 exhibited a decrease in both the total CVOC and AVOC concentrations. Total CVOCs decreased by factors of approximately 100 and 3, respectively, while total AVOC concentrations of 0.047 and 0.567 milligrams per liter (mg/l) respectively, decreased to none detected.

- Groundwater from three monitoring wells, SH-3D, SH-4S, and AE-18D, in which VOCs were previously detected at relatively low concentrations, exhibited no VOCs above the method detection limit.

A general increase in total VOC concentrations from the June to the December monitoring rounds was observed in groundwater from four monitoring wells.

- Total CVOC concentrations increased in groundwater from monitoring wells SH-3S, AE-17D, and AE-18S by factors of approximately 2.5, 1.2, and 2.1 respectively. Of particular note, the concentration of vinyl chloride in groundwater from AE-18S increased from 0.11 mg/l to 0.5 mg/l.

- Total AVOC concentrations increased in groundwater from monitoring wells AE-1, AE-17D, and AE-18S by factors of approximately 2.9, 2.1, and 11, respectively.

Three of the monitoring wells sampled in December 1995, namely, the Howard Manor Condominium and Howard residence overburden wells and the on-site dug well, were not sampled during the June 1995 sampling event.

- Groundwater from the Howard Manor overburden well was last sampled in July 1993 by the NHDES. At that time low levels of CVOCs were detected (0.019 mg/l total CVOCs). No VOCs were detected in groundwater from this well in the December 1995 sampling round.

- Groundwater from the Howard residence overburden well was last sampled in May 1992 by the NHDES. At that time both CVOCs and AVOCs were detected. The groundwater sample collected in December 1995 exhibited no AVOCs and a decrease in the total CVOC concentration by a factor of approximately 5 (from 0.252 to 0.057 mg/l).

- The on-site dug well is a shallow overburden well located in the northeastern portion of Parcel 2. No prior water quality data were available for this well. Both CVOCs and AVOCs were detected at total concentrations of 0.86 and 0.056 mg/l, respectively. The NHDES ambient groundwater quality standards (AGQS) were equalled or exceeded for benzene, 1,1-dichloroethane, 1,2-dichloroethane, cis-1,2-dichloroethene, and vinyl chloride.

In addition to VOCs, groundwater was analyzed for PCBs. With the exception of 0.001 mg/l of total PCBs detected in the sample collected from AE-4, total PCBs were not detected above the method detection limit of 0.0005 mg/l in any of the groundwater samples. The PCB concentration detected in the groundwater from AE-4 exceeds the MCL for total PCBs of 0.0005 mg/l. The occurrence of PCBs in the groundwater sample from AE-4 is most likely attributed to the presence of small quantities of product in the sample (a sheen was observed on the groundwater). A product thickness

of 0.21 feet was measured in AE-4 in June 1995. At that time, product from AE-4 exhibited a total PCB concentration of 46 mg/kg (including 34 mg/kg of arochlor-1242).

Surface water samples were collected at six locations along Kelley Brook. Five of the sample locations, SW-1, SW-2, SW-4, SW-5, and SW-8 were sampled in June 1995. For this round, surface water sample location SW-7 located on Kelley Brook was sampled in lieu of SW-6 located on the unnamed tributary draining into Kelley Brook.

- VOCs were not detected in samples from locations SW-1 and SW-5, representing no change from the June 1995 results. In addition, no VOCs were detected in water collected at SW-7.

- Samples from locations SW-4 and SW-8 exhibited a decrease in total VOC concentrations. In the sample collected at SW-4, total AVOC and CVOC concentrations decreased from 0.038 and 0.069 mg/l, respectively, to none detected. Total CVOCs in SW-8 decreased from 0.010 to 0.003 mg/l (no AVOCs detected).

- An increase in both total AVOC and CVOC concentrations was detected in the sample collected from location SW-2; total AVOCs increased from 0.009 to 0.084 mg/l, and total CVOCs increased from none detected to 0.013 mg/l.

CONCLUSIONS

The findings of the December 1995 water quality monitoring round are generally consistent with those of June 1995. Specific observations follow:

- All of the monitoring wells (12) which previously yielded groundwater samples with no detected VOCs continued to do so.

- Groundwater from nine wells, most located on Parcel 1 near identified source areas, exhibited decreases in total VOC concentrations.

- Groundwater from four monitoring wells, located on Parcel 2 and at the downgradient boundary of Parcel 1, exhibited increases in contaminant concentrations.

- The observed changes in VOC concentrations are interpreted to be related to seasonal fluctuations in hydrogeologic conditions and consistent with the hydrogeologic/contaminant transport model developed by SHA for the site and presented in the Site and Waste Characterization Report.

- PCBs were detected above the method detection limit and MCL of 0.0005 mg/l in only one groundwater sample, that from monitoring well AE-4 (0.001 mg/l total PCBs). The presence

of PCBs in the groundwater sample from AE-4 may be attributed to small quantities of PCB-containing product in the sample.

Please contact us with any questions or comments you may have regarding this document. We look forward to continuing to work with the NHDES on this project.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

James Z. Taylor
Project Hydrogeologist

Charles A. Crocetti, Ph.D., P.G.
Principal

Paul M. Sanborn
President/Principal

JZT:jzt/las

Attachments: Tables 1, 2, and 3
Figure 1
Appendices A and B

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TABLES

Table 1
Summary of Groundwater Elevations and Product Thickness Measurements
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation	Ground Surface Elevation	6/13/95			6/14/95		
			Depth to Water	Product Thickness	Equivalent Potentiometric Elevation	Depth to Water	Product Thickness	Equivalent Potentiometric Elevation
SH - 1D	127.37	125.00	17.62		109.75	17.60		109.77
SH - 2S	123.07	120.40	18.18		104.89			
SH - 2D	122.98	120.40	18.11		104.87			
SH - 3S	131.84	129.70	24.48		107.36			
SH - 3D	132.23	129.80	25.35		106.88			
SH - 4S	131.05	128.50	18.88		112.17			
SH - 4D	131.32	128.60	21.82		109.50			
SH - 5	130.60	130.90	24.99	5.09	110.09			
SH - 6	120.86	118.30	15.48	2.78	107.80			
SH - 7	134.01	131.20	24.07	1.39	111.15			
SH - 8	131.35	131.80	20.72		110.63			
SH - 9	132.83	130.00	24.88		107.95			
SH - 10	128.70	127.10	23.50	2.73	107.52			
SH - 11	121.45	119.10	15.49		105.96			
SH - 12	120.73	118.40	10.48		110.25	10.48		110.25
AE - 1	128.63	126.27	18.62		110.01	18.62		110.01
AE - 2	127.68	125.29	17.85		109.83	17.85		109.83
AE - 3	122.68	119.27	14.28	2.10	110.14			
AE - 4	133.84	131.40	23.30	0.21	110.71			
AE - 5	131.19	131.40	22.01		109.18			
AE - 8	134.21	131.30	25.49		108.72			
AE - 9	132.69	130.33	25.16	1.39	108.71			
AE - 10	132.55	129.50	18.98		113.57	18.99		113.56
AE - 11S	133.65	131.00	26.00	2.49	109.79			
AE - 11D	132.66	130.90	23.43		109.23			
AE - 12	132.90	130.66	20.79		112.11	20.78		112.12
AE - 14	131.88	129.42	24.21		107.67			
AE - 16	130.09	125.10	25.86	4.49	108.18			
AE - 17S	121.31	118.42	15.84		105.47			
AE - 17D	121.39	118.74	16.02		105.37			
AE - 18S	123.46	120.00	18.20		105.26			
AE - 18D	121.85	120.00	16.60		105.25			
AE - 20	130.89	127.73	17.04		113.85	17.03		113.86
AE - 21	132.24	132.24	20.98		111.26			
AE - 22	131.95	131.95	21.18		110.77			
MW - 4	125.54	123.40	13.40		112.14	13.42		112.12
on-site WS - 1 (BR)	132.99	131.26	26.43		106.56			
on-site WS - 2 (BR)*	131.26	130.31	25.50		105.76			
on-site Dug Well (DG-OB)	113.03	108.78	8.09		104.94			
Hill (DG-OB)*	118.50		8.45		110.05			
Emerson (DG-OB)*	116.40		8.50		107.90			
Rheaume (DG-OB)*	118.10		13.30		104.80			
Carrington (DG-OB)	118.10		8.30		109.80			
Howard Manor (BR)*	108.40		12.00		96.40	7.32		101.08
Howard Manor (DR-OB)	108.60		5.13		103.47	5.14		103.46
Howard Residence (DR-OB)	116.50	114.70				11.84		104.66
Howard Residence (BR) *	115.70	114.90	21.40		94.30	14.08		101.62
Sawyer (DR-OB)*	107.30							
Joray/Armstrong (BR)*	120.40					48.30		72.10
Elwell (BR)*	129.20		29.30		99.90			
Banaski (BR)*	130.20					28.10		102.10

Table 1
Summary of Groundwater Elevations and Product Thickness Measurements
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation	Ground Surface Elevation	6/15/95			6/16/95		
			Depth to Water	Product Thickness	Equivalent Potentiometric Elevation	Depth to Water	Product Thickness	Equivalent Potentiometric Elevation
SH - 1D	127.37	125.00						
SH - 2S	123.07	120.40	18.20		104.87			
SH - 2D	122.98	120.40	18.10		104.88			
SH - 3S	131.84	129.70	24.54		107.30			
SH - 3D	132.23	129.80	25.42		106.81			
SH - 4S	131.05	128.50				18.93		112.12
SH - 4D	131.32	128.60				21.86		109.46
SH - 5	130.60	130.90				25.31	5.38	110.02
SH - 6	120.86	118.30				15.38	2.66	107.79
SH - 7	134.01	131.20				24.04	1.29	111.09
SH - 8	131.35	131.80				20.75		110.60
SH - 9	132.83	130.00	24.88		107.95			
SH - 10	128.70	127.10				23.55	2.76	107.50
SH - 11	121.45	119.10	15.52		105.93			
SH - 12	120.73	118.40						
AE - 1	128.63	126.27						
AE - 2	127.68	125.29						
AE - 3	122.68	119.27						
AE - 4	133.84	131.40						
AE - 5	131.19	131.40						
AE - 8	134.21	131.30						
AE - 9	132.69	130.33						
AE - 10	132.55	129.50						
AE - 11S	133.65	131.00						
AE - 11D	132.66	130.90				23.33		109.33
AE - 12	132.90	130.66						
AE - 14	131.88	129.42				24.22		107.66
AE - 16	130.09	125.10						
AE - 17S	121.31	118.42	15.87		105.44			
AE - 17D	121.39	118.74	16.04		105.35			
AE - 18S	123.46	120.00	18.22		105.24			
AE - 18D	121.85	120.00	16.60		105.25			
AE - 20	130.89	127.73						
AE - 21	132.24	132.24				21.01		111.23
AE - 22	131.95	131.95				21.21		110.74
MW - 4	125.54	123.40						
on-site WS - 1 (BR)	132.99	131.26				25.96		107.03
on-site WS - 2 (BR)*	131.26	130.31						
on-site Dug Well (DG-OB)	113.03	108.78						
Hill (DG-OB)*	118.50							
Emerson (DG-OB)*	116.40							
Rheaume (DG-OB)*	118.10							
Carrington (DG-OB)	118.10							
Howard Manor (BR)*	108.40							
Howard Manor (DR-OB)	108.60							
Howard Residence (DR-OB)	116.50	114.70						
Howard Residence (BR) *	115.70	114.90						
Sawyer (DR-OB)*	107.30					3.84		103.46
Joray/Armstrong (BR)*	120.40							
Elwell (BR)*	129.20							
Banaski (BR)*	130.20							

Table 1
Summary of Groundwater Elevations and Product Thickness Measurements
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation	Ground Surface Elevation	6/19/95			6/20/95		
			Depth to Water	Product Thickness	Equivalent Potentiometric Elevation	Depth to Water	Product Thickness	Equivalent Potentiometric Elevation
SH - 1D	127.37	125.00						
SH - 2S	123.07	120.40						
SH - 2D	122.98	120.40						
SH - 3S	131.84	129.70						
SH - 3D	132.23	129.80						
SH - 4S	131.05	128.50						
SH - 4D	131.32	128.60						
SH - 5	130.60	130.90						
SH - 6	120.86	118.30						
SH - 7	134.01	131.20						
SH - 8	131.35	131.80						
SH - 9	132.83	130.00						
SH - 10	128.70	127.10						
SH - 11	121.45	119.10						
SH - 12	120.73	118.40						
AE - 1	128.63	126.27						
AE - 2	127.68	125.29						
AE - 3	122.68	119.27	14.28	2.01	110.07			
AE - 4	133.84	131.40	23.40	0.23	110.63	23.40	0.23	110.63
AE - 5	131.19	131.40	22.12		109.07	22.16		109.03
AE - 8	134.21	131.30	26.32	1.23	109.05			
AE - 9	132.69	130.33	25.27	1.42	108.63			
AE - 10	132.55	129.50						
AE - 11S	133.65	131.00	26.28	2.72	109.71			
AE - 11D	132.66	130.90						
AE - 12	132.90	130.66						
AE - 14	131.88	129.42						
AE - 16	130.09	125.10	25.95	4.48	108.08			
AE - 17S	121.31	118.42						
AE - 17D	121.39	118.74						
AE - 18S	123.46	120.00						
AE - 18D	121.85	120.00						
AE - 20	130.89	127.73						
AE - 21	132.24	132.24						
AE - 22	131.95	131.95						
MW - 4	125.54	123.40						
on-site WS - 1 (BR)	132.99	131.26						
on-site WS - 2 (BR)*	131.26	130.31						
on-site Dug Well (DG-OB)	113.03	108.78						
Hill (DG-OB)*	118.50							
Emerson (DG-OB)*	116.40							
Rheaume (DG-OB)*	118.10							
Carrington (DG-OB)	118.10							
Howard Manor (BR)*	108.40							
Howard Manor (DR-OB)	108.60							
Howard Residence (DR-OB)	116.50	114.70						
Howard Residence (BR) *	115.70	114.90						
Sawyer (DR-OB)*	107.30							
Joray/Armstrong (BR)*	120.40							
Elwell (BR)*	129.20							
Banaski (BR)*	130.20							

Table 1
Summary of Groundwater Elevations and Product Thickness Measurements
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation	Ground Surface Elevation	8/9/95			12/13/95		
			Depth to Water	Product Thickness	Equivalent Potentiometric Elevation	Depth to Water	Product Thickness	Equivalent Potentiometric Elevation
SH - 1D	127.37	125.00				17.10		110.27
SH - 2S	123.07	120.40	18.38		104.69	17.74		105.33
SH - 2D	122.98	120.40	18.29		104.69	17.65		105.33
SH - 3S	131.84	129.70	25.14		106.70			
SH - 3D	132.23	129.80	25.99		106.24			
SH - 4S	131.05	128.50						
SH - 4D	131.32	128.60						
SH - 5	130.60	130.90						
SH - 6	120.86	118.30						
SH - 7	134.01	131.20						
SH - 8	131.35	131.80						
SH - 9	132.83	130.00						
SH - 10	128.70	127.10						
SH - 11	121.45	119.10						
SH - 12	120.73	118.40						
AE - 1	128.63	126.27						
AE - 2	127.68	125.29						
AE - 3	122.68	119.27						
AE - 4	133.84	131.40						
AE - 5	131.19	131.40						
AE - 8	134.21	131.30						
AE - 9	132.69	130.33						
AE - 10	132.55	129.50						
AE - 11S	133.65	131.00						
AE - 11D	132.66	130.90						
AE - 12	132.90	130.66						
AE - 14	131.88	129.42						
AE - 16	130.09	125.10						
AE - 17S	121.31	118.42						
AE - 17D	121.39	118.74						
AE - 18S	123.46	120.00						
AE - 18D	121.85	120.00						
AE - 20	130.89	127.73						
AE - 21	132.24	132.24						
AE - 22	131.95	131.95						
MW - 4	125.54	123.40						
on-site WS - 1 (BR)	132.99	131.26						
on-site WS - 2 (BR)*	131.26	130.31						
on-site Dug Well (DG-OB)	113.03	108.78						
Hill (DG-OB)*	118.50							
Emerson (DG-OB)*	116.40							
Rheaume (DG-OB)*	118.10							
Carrington (DG-OB)	118.10							
Howard Manor (BR)*	108.40							
Howard Manor (DR-OB)	108.60							
Howard Residence (DR-OB)	116.50	114.70	12.00		104.50			
Howard Residence (BR) *	115.70	114.90	13.27		102.43			
Sawyer (DR-OB)*	107.30							
Joray/Armstrong (BR)*	120.40							
Elwell (BR)*	129.20							
Banaski (BR)*	130.20							

Table 1
Summary of Groundwater Elevations and Product Thickness Measurements
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation	Ground Surface Elevation	12/14/95			12/15/95		
			Depth to Water	Product Thickness	Equivalent Potentiometric Elevation	Depth to Water	Product Thickness	Equivalent Potentiometric Elevation
SH - 1D	127.37	125.00						
SH - 2S	123.07	120.40						
SH - 2D	122.98	120.40						
SH - 3S	131.84	129.70	24.15		107.69	24.10		107.74
SH - 3D	132.23	129.80	25.06		107.17			
SH - 4S	131.05	128.50	19.10		111.95	19.12		111.93
SH - 4D	131.32	128.60	21.62		109.70	21.63		109.69
SH - 5	130.60	130.90				22.91	3.16	110.47
SH - 6	120.86	118.30				15.84	3.58	108.13
SH - 7	134.01	131.20				23.43	0.99	111.44
SH - 8	131.35	131.80						
SH - 9	132.83	130.00				24.62		108.21
SH - 10	128.70	127.10				22.58	2.13	107.93
SH - 11	121.45	119.10				15.07		106.38
SH - 12	120.73	118.40						
AE - 1	128.63	126.27						
AE - 2	127.68	125.29						
AE - 3	122.68	119.27				13.43	1.59	110.57
AE - 4	133.84	131.40				22.75		111.09
AE - 5	131.19	131.40						
AE - 8	134.21	131.30				26.56	1.96	109.49
AE - 9	132.69	130.33				24.41	1.01	109.14
AE - 10	132.55	129.50						
AE - 11S	133.65	131.00				24.55	1.16	110.10
AE - 11D	132.66	130.90				23.06		109.60
AE - 12	132.90	130.66						
AE - 14	131.88	129.42				23.84		108.04
AE - 16	130.09	125.10				25.12	4.14	108.61
AE - 17S	121.31	118.42				15.40		105.91
AE - 17D	121.39	118.74				15.63		105.76
AE - 18S	123.46	120.00				17.78		105.68
AE - 18D	121.85	120.00				16.16		105.69
AE - 20	130.89	127.73						
AE - 21	132.24	132.24				20.65		111.59
AE - 22	131.95	131.95				20.80		111.15
MW - 4	125.54	123.40						
on-site WS - 1 (BR)	132.99	131.26						
on-site WS - 2 (BR)*	131.26	130.31						
on-site Dug Well (DG-OB)	113.03	108.78	7.69		105.34			
Hill (DG-OB)*	118.50							
Emerson (DG-OB)*	116.40							
Rheaume (DG-OB)*	118.10							
Carrington (DG-OB)	118.10							
Howard Manor (BR)*	108.40							
Howard Manor (DR-OB)	108.60							
Howard Residence (DR-OB)	116.50	114.70						
Howard Residence (BR) *	115.70	114.90						
Sawyer (DR-OB)*	107.30							
Joray/Armstrong (BR)*	120.40							
Elwell (BR)*	129.20							
Banaski (BR)*	130.20							

Table 1
Summary of Groundwater Elevations and Product Thickness Measurements
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Monitoring Well Location	Reference Elevation	Ground Surface Elevation	12/18/95		
			Depth to Water	Product Thickness	Equivalent Potentiometric Elevation
SH - 1D	127.37	125.00			
SH - 2S	123.07	120.40			
SH - 2D	122.98	120.40			
SH - 3S	131.84	129.70			
SH - 3D	132.23	129.80			
SH - 4S	131.05	128.50	19.13		111.92
SH - 4D	131.32	128.60	21.63		109.69
SH - 5	130.60	130.90			
SH - 6	120.86	118.30			
SH - 7	134.01	131.20			
SH - 8	131.35	131.80	20.42		110.93
SH - 9	132.83	130.00			
SH - 10	128.70	127.10			
SH - 11	121.45	119.10			
SH - 12	120.73	118.40	10.05		110.68
AE - 1	128.63	126.27	18.37		110.26
AE - 2	127.68	125.29	17.37		110.31
AE - 3	122.68	119.27			
AE - 4	133.84	131.40	22.75		111.09
AE - 5	131.19	131.40	21.60	0.18	109.75
AE - 8	134.21	131.30			
AE - 9	132.69	130.33			
AE - 10	132.55	129.50	19.04		113.51
AE - 11S	133.65	131.00			
AE - 11D	132.66	130.90			
AE - 12	132.90	130.66	20.89		112.01
AE - 14	131.88	129.42			
AE - 16	130.09	125.10			
AE - 17S	121.31	118.42			
AE - 17D	121.39	118.74			
AE - 18S	123.46	120.00			
AE - 18D	121.85	120.00			
AE - 20	130.89	127.73	17.38		113.51
AE - 21	132.24	132.24			
AE - 22	131.95	131.95			
MW - 4	125.54	123.40	13.54		112.00
on-site WS - 1 (BR)	132.99	131.26			
on-site WS - 2 (BR)*	131.26	130.31			
on-site Dug Well (DG-OB)	113.03	108.78			
Hill (DG-OB)*	118.50				
Emerson (DG-OB)*	116.40				
Rheaume (DG-OB)*	118.10				
Carrington (DG-OB)	118.10				
Howard Manor (BR)*	108.40				
Howard Manor (DR-OB)	108.60		4.60		104.00
Howard Residence (DR-OB)	116.50	114.70	11.59		104.91
Howard Residence (BR) *	115.70	114.90			
Sawyer (DR-OB)*	107.30				
Joray/Armstrong (BR)*	120.40				
Elwell (BR)*	129.20				
Banaski (BR)*	130.20				

Table 1
Summary of Groundwater Elevations and Product Thickness Measurements
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Measurements are reported in feet.

2. Groundwater level and product thickness measurements were obtained by SHA personnel on the dates indicated using a Slope Indicator Co. oil/water interface probe or water level meter.

3. Reference point elevations were surveyed by Hayner/Swanson, Inc. (HSI) of Nashua, New Hampshire between June 16 and 20, 1995. Elevations are in feet relative to the USGS datum which is equivalent to mean sea level.

4. The top of the PVC well casing was used as the reference point for measurements at all wells except AE-17D where the top of the steel casing was used as a reference point.

5. "BR" indicates a bedrock water supply well.
   "DG-OB" indicates a dug overburden water supply well.
   "DR-OB" indicates a drilled or driven overburden water supply well.

6. Equivalent potentiometric elevations were calculated by multiplying the measured product thickness by a product specific gravity and subtracting this from the depth to groundwater. The following specific gravities were used for the corresponding monitoring wells based on specific gravity data determined from product samples collected at the site:

   0.83 – AE-3
   0.85 – AE-9, SH-10
   0.86 – AE-11S
   0.87 – SH-6, SH-7
   0.88 – AE-16, SH-5
   0.90 – AE-5
   0.94 – AE-8

7. "*" indicates wells actively used for water supply. Therefore, water levels may not represent static conditions.

8. Groundwater levels were measured for monitoring wells RFW-1 and RFW-2 on December 21, 1995. Depth to water from top of PVC casing was 23.83 and 4.88 feet, respectively.

Table 2
Summary of VOC Data (mg/l) for Groundwater Samples
Beede Waste Oil / Cash Energy Site - Plaistow, New Hampshire

Location		SH-1D		SH-2S		SH-2D		SH-3S		SH-3D		SH-4S	
VOC Dilution Factor		1		1		1		1		1		1	
Date of Sample		6/14/95	12/13/95	6/15/95	12/13/95	6/15/95	12/13/95	6/15/95	12/14/95	6/15/95	12/14/95	6/16/95	12/14/95
Compounds	AGQS												
Benzene	0.005 (MCL)											0.002	
sec-Butylbenzene	NA												
Ethylbenzene	0.70 (MCL)											0.003	
Isopropylbenzene	NA												
p-Isopropyltoluene	NA												
Naphthalene	0.020 (LHA)											0.002	
n-Propylbenzene	NA											0.001	
Toluene	1.0 (MCL)									0.005			
1,2,4-Trimethylbenzene	NA											0.008	
1,3,5-Trimethylbenzene	NA												
o-Xylene	10.0* (MCL)												
m,p-Xylene	10.0* (MCL)											0.002	
MTBE	0.10 (BHRA)												
Total Non-Chlorinated Aromatic VOCs + MTBE	NA									0.005		0.018	
Chloroethane	NA												
Chloroform	0.006** (EPA 10-6)												
1,2-Dichlorobenzene	0.60 (MCL)												
1,4-Dichlorobenzene	0.075 (MCL)												
1,1-Dichloroethane	0.081 (BHRA)							0.002	0.004			0.012	
1,2-Dichloroethane	0.005 (MCL)												
1,1-Dichloroethene	0.007 (MCL)												
cis-1,2-Dichloroethene	0.070 (MCL)											0.015	
trans-1,2-Dichloroethene	0.10 (MCL)												
Tetrachloroethene	0.005 (MCL)							0.002	***0.005***				
1,1,1-Trichloroethane	0.20 (MCL)							0.004	0.011			0.004	
Trichloroethene	0.005 (MCL)												
Vinyl Chloride	0.002 (MCL)												
Total Chlorinated VOCs	NA							0.008	0.020			0.031	
2-Butanone (MEK)	0.17 (LHA)												
4-Methyl-2-pentanone (MIBK)	0.35 (BHRA)												

Table 2
Summary of VOC Data (mg/l) for Groundwater Samples
Beede Waste Oil / Cash Energy Site - Plaistow, New Hampshire

Location		SH-4D		SH-5	SH-6	SH-7	SH-8		SH-9		SH-10	SH-11	
VOC Dilution Factor		1		10	10	1	1		1		10	1	
Date of Sample		6/16/95	12/14/95	6/19/95	6/22/95	6/21/95	6/16/95	12/18/95	6/15/95	12/15/95	6/22/95	6/15/95	12/15/95
Compounds	AGQS												
Benzene	0.005 (MCL)			***0.14***	***0.78***	0.004					***0.01***		
sec-Butylbenzene	NA												
Ethylbenzene	0.70 (MCL)			0.07	0.46	0.036					***1.3***		
Isopropylbenzene	NA				0.02	0.003					0.08		
p-Isopropyltoluene	NA					0.001					0.08		
Naphthalene	0.020 (LHA)			***0.03***	***0.10***	***0.038***					***0.46***		
n-Propylbenzene	NA			0.02	0.04	0.009					0.19		
Toluene	1.0 (MCL)			0.99	***1.2***	0.055					0.66		
1,2,4-Trimethylbenzene	NA			0.10	0.31	0.086					1.7		
1,3,5-Trimethylbenzene	NA			0.04	0.12	0.027					0.76		
o-Xylene	10.0* (MCL)			0.12	0.39	0.077					0.94		
m,p-Xylene	10.0* (MCL)			0.14	1.0	0.10					2.6		
MTBE	0.10 (BHRA)												
Total Non-Chlorinated Aromatic VOCs + MTBE	NA			1.65	4.42	0.436					8.78		
Chloroethane	NA				0.20								
Chloroform	0.006** (EPA 10-6)												
1,2-Dichlorobenzene	0.60 (MCL)				0.02	0.007					0.03		
1,4-Dichlorobenzene	0.075 (MCL)												
1,1-Dichloroethane	0.081 (BHRA)			0.04	***3.0***	0.009	0.009	0.006	0.005				
1,2-Dichloroethane	0.005 (MCL)			***0.02***									
1,1-Dichloroethene	0.007 (MCL)			***0.03***	***0.02***								
cis-1,2-Dichloroethene	0.070 (MCL)			***2.1***	***1.3***	0.038	0.005	0.002	0.008	0.003	0.03		
trans-1,2-Dichloroethene	0.10 (MCL)				***0.11***								
Tetrachloroethene	0.005 (MCL)							0.004	***0.016***	***0.019***	***0.03***		
1,1,1-Trichloroethane	0.20 (MCL)			***1.4***	***0.31***	0.038	0.044	0.036	0.010		***0.220***		
Trichloroethene	0.005 (MCL)			***1.5***			***0.024***	***0.019***	0.002				
Vinyl Chloride	0.002 (MCL)				***2.2***								
Total Chlorinated VOCs	NA			5.09	7.16	0.092	0.082	0.067	0.041	0.022	0.31		
2-Butanone (MEK)	0.17 (LHA)					0.01							
4-Methyl-2-pentanone (MIBK)	0.35 (BHRA)			0.10									

Table 2
Summary of VOC Data (mg/l) for Groundwater Samples
Beede Waste Oil / Cash Energy Site - Plaistow, New Hampshire

Location		SH-12		AE-1		AE-2		AE-3	AE-4		AE-5	AE-8	AE-9
VOC Dilution Factor		1		1		1		1	10		10	10	10
Date of Sample		6/14/95	12/18/95	6/14/95	12/18/95	6/14/95	12/18/95	6/22/95	6/20/95	12/18/95	6/20/95	6/22/95	6/22/95
Compounds	AGQS												
Benzene	0.005 (MCL)							***0.026***		***0.01***	***0.06***	***0.04***	***0.07***
sec-Butylbenzene	NA				0.002		0.008	0.010	0.10	0.02			
Ethylbenzene	0.70 (MCL)			0.011	0.014	0.084	0.045	0.10	0.11	0.07	0.16	0.02	0.13
Isopropylbenzene	NA			0.004	0.005	0.020	0.018	0.020	0.05	0.02	0.01		
p-Isopropyltoluene	NA				0.004			0.010	0.10	0.04			
Naphthalene	0.020 (LHA)			0.010	0.016	***0.091***	***0.057***	***0.22***	***0.28***	***0.15***	***0.19***	***0.02***	***0.08***
n-Propylbenzene	NA			0.006	0.009	0.033	0.026	0.020	0.11	0.03	0.03		0.02
Toluene	1.0 (MCL)							0.13	0.01		0.56	0.13	0.76
1,2,4-Trimethylbenzene	NA			0.005	0.052	0.19	0.15	0.35	0.86	0.21	0.26	0.05	0.17
1,3,5-Trimethylbenzene	NA			0.011	0.017	0.025	0.008	0.10	0.36	0.08	0.08	0.02	0.05
o-Xylene	10.0* (MCL)			0.003	0.04	0.16	0.077	0.17	0.21	0.09	0.25	0.06	0.20
m,p-Xylene	10.0* (MCL)			0.011	0.015	0.064	0.009	0.33	0.25	0.12	0.52	0.10	0.43
MTBE	0.10 (BHRA)			***0.21***	***0.11***								
Total Non-Chlorinated Aromatic VOCs + MTBE	NA			0.271	0.284	0.667	0.398	1.486	2.44	0.84	2.12	0.44	1.91
Chloroethane	NA												
Chloroform	0.006** (EPA 10-6)												
1,2-Dichlorobenzene	0.60 (MCL)							0.001			0.02		
1,4-Dichlorobenzene	0.075 (MCL)												
1,1-Dichloroethane	0.081 (BHRA)										0.07	***0.44***	***0.22***
1,2-Dichloroethane	0.005 (MCL)											***0.03***	
1,1-Dichloroethene	0.007 (MCL)												
cis-1,2-Dichloroethene	0.070 (MCL)							0.002			0.04	***0.49***	***0.18***
trans-1,2-Dichloroethene	0.10 (MCL)												
Tetrachloroethene	0.005 (MCL)												
1,1,1-Trichloroethane	0.20 (MCL)										0.07	0.07	***0.36***
Trichloroethene	0.005 (MCL)												
Vinyl Chloride	0.002 (MCL)										***0.13***		
Total Chlorinated VOCs	NA							0.003			0.33	1.03	0.76
2-Butanone (MEK)	0.17 (LHA)												
4-Methyl-2-pentanone (MIBK)	0.35 (BHRA)												

Table 2
Summary of VOC Data (mg/l) for Groundwater Samples
Beede Waste Oil / Cash Energy Site - Plaistow, New Hampshire

Location		AE-9B	AE-10		AE-11D		AE-12		AE-14		AE-16	AE-17S	
VOC Dilution Factor		10	1		1		1		1		10	1	
Date of Sample		6/22/95	6/14/95	12/18/95	6/16/95	12/15/95	6/14/95	12/18/95	6/16/95	12/15/95	6/22/95	6/15/95	12/15/95
Compounds	AGQS												
Benzene	0.005 (MCL)	***0.15***			***0.005***		0.004				***0.05***		
sec-Butylbenzene	NA	0.01					0.002						
Ethylbenzene	0.70 (MCL)	0.31			0.001		0.068				0.09		
Isopropylbenzene	NA	0.02					0.008						
p-Isopropyltoluene	NA												
Naphthalene	0.020 (LHA)	***0.23***			0.002		***0.053***				***0.07***		
n-Propylbenzene	NA	0.06					0.021				0.01		
Toluene	1.0 (MCL)	***1.5***			0.017		0.005				0.12		
1,2,4-Trimethylbenzene	NA	0.45			0.004		0.16				0.14		
1,3,5-Trimethylbenzene	NA	0.12			0.002		0.045				0.04		
o-Xylene	10.0* (MCL)	0.46			0.008		0.12				0.13		
m,p-Xylene	10.0* (MCL)	1.0			0.008		0.081				0.21		
MTBE	0.10 (BHRA)												
Total Non-Chlorinated Aromatic VOCs + MTBE	NA	4.31			0.047		0.567				0.86		
Chloroethane	NA										0.54		
Chloroform	0.006** (EPA 10-6)						0.002	0.002					
1,2-Dichlorobenzene	0.60 (MCL)	0.02									0.01		
1,4-Dichlorobenzene	0.075 (MCL)												
1,1-Dichloroethane	0.081 (BHRA)	***0.18***			0.005		0.063	0.029			***0.34***		
1,2-Dichloroethane	0.005 (MCL)				0.004		0.002						
1,1-Dichloroethene	0.007 (MCL)												
cis-1,2-Dichloroethene	0.070 (MCL)	***0.54***			***0.29***	0.004	***0.16***	0.003	0.013	0.014			
trans-1,2-Dichloroethene	0.10 (MCL)												
Tetrachloroethene	0.005 (MCL)						***0.021***	***0.047***	***0.009***	***0.01***			
1,1,1-Trichloroethane	0.20 (MCL)	***0.75***			0.089		0.075	0.026	0.011	0.005			
Trichloroethene	0.005 (MCL)				0.003		***0.010***		***0.006***	***0.005***			
Vinyl Chloride	0.002 (MCL)												
Total Chlorinated VOCs	NA	1.49			0.391	0.004	0.333	0.107	0.039	0.034	0.89		
2-Butanone (MEK)	0.17 (LHA)												
4-Methyl-2-pentanone (MIBK)	0.35 (BHRA)												

Table 2
Summary of VOC Data (mg/l) for Groundwater Samples
Beede Waste Oil / Cash Energy Site - Plaistow, New Hampshire

Location		AE-17D		AE-18S		AE-18D		AE-20		AE-21		AE-22	
VOC Dilution Factor		10		10		1		1		1		1	
Date of Sample		6/15/95	12/15/95	6/15/95	12/15/95	6/15/95	12/15/95	6/14/95	12/18/95	6/16/95	12/15/95	6/16/95	12/15/95
Compounds	AGQS												
Benzene	0.005 (MCL)	***0.04***	***0.06***	***0.01***	***0.07***								
sec-Butylbenzene	NA												
Ethylbenzene	0.70 (MCL)				0.06								
Isopropylbenzene	NA												
p-Isopropyltoluene	NA												
Naphthalene	0.020 (LHA)		***0.06***		***0.03***								
n-Propylbenzene	NA												
Toluene	1.0 (MCL)				0.04								
1,2,4-Trimethylbenzene	NA	0.07	0.10	0.01	0.05	0.001							
1,3,5-Trimethylbenzene	NA		0.05										
o-Xylene	10.0* (MCL)	0.06	0.09	0.01	0.06								
m,p-Xylene	10.0* (MCL)				0.03								
MTBE	0.10 (BHRA)												
Total Non-Chlorinated Aromatic VOCs + MTBE	NA	0.17	0.36	0.03	0.34	0.001							
Chloroethane	NA												
Chloroform	0.006** (EPA 10-6)												
1,2-Dichlorobenzene	0.60 (MCL)												
1,4-Dichlorobenzene	0.075 (MCL)												
1,1-Dichloroethane	0.081 (BHRA)	0.02		0.07	***0.25***	0.002							
1,2-Dichloroethane	0.005 (MCL)												
1,1-Dichloroethene	0.007 (MCL)												
cis-1,2-Dichloroethene	0.070 (MCL)	***0.65***	***0.80***	***0.78***	***1.4***	0.004							
trans-1,2-Dichloroethene	0.10 (MCL)			0.04	0.05								
Tetrachloroethene	0.005 (MCL)												
1,1,1-Trichloroethane	0.20 (MCL)	0.12	0.15	0.15	***0.21***								
Trichloroethene	0.005 (MCL)	***0.02***	***0.02***										
Vinyl Chloride	0.002 (MCL)			***0.11***	***0.50***								
Total Chlorinated VOCs	NA	0.81	0.97	1.15	2.41	0.006							
2-Butanone (MEK)	0.17 (LHA)												
4-Methyl-2-pentanone (MIBK)	0.35 (BHRA)												

Table 2
Summary of VOC Data (mg/l) for Groundwater Samples
Beede Waste Oil / Cash Energy Site - Plaistow, New Hampshire

Location		MW-4		MW-4 DUP (OW-2)	on-site Dug Well	HM	HR	OW-1
VOC Dilution Factor		1		1	1	1	1	1
Date of Sample		6/14/95	12/18/95	12/18/95	12/14/95	12/18/95	12/18/95	12/15/95
Compounds	AGQS							
Benzene	0.005 (MCL)				***0.042***			
sec-Butylbenzene	NA							
Ethylbenzene	0.70 (MCL)							
Isopropylbenzene	NA				0.002			
p-Isopropyltoluene	NA							
Naphthalene	0.020 (LHA)				0.008			
n-Propylbenzene	NA							
Toluene	1.0 (MCL)							
1,2,4-Trimethylbenzene	NA							
1,3,5-Trimethylbenzene	NA							
o-Xylene	10.0* (MCL)				0.004			
m,p-Xylene	10.0* (MCL)							
MTBE	0.10 (BHRA)							
Total Non-Chlorinated Aromatic VOCs + MTBE	NA				0.056			
Chloroethane	NA				0.05			
Chloroform	0.006** (EPA 10-6)							
1,2-Dichlorobenzene	0.60 (MCL)				0.002			
1,4-Dichlorobenzene	0.075 (MCL)							
1,1-Dichloroethane	0.081 (BHRA)				***0.19***			
1,2-Dichloroethane	0.005 (MCL)				***0.005***			
1,1-Dichloroethene	0.007 (MCL)							
cis-1,2-Dichloroethene	0.070 (MCL)				***0.40***		0.023	
trans-1,2-Dichloroethene	0.10 (MCL)				0.02			
Tetrachloroethene	0.005 (MCL)						***0.015***	
1,1,1-Trichloroethane	0.20 (MCL)				0.05		0.007	
Trichloroethene	0.005 (MCL)						***0.006***	
Vinyl Chloride	0.002 (MCL)				***0.14***			
Total Chlorinated VOCs	NA				0.857		0.051	
2-Butanone (MEK)	0.17 (LHA)							
4-Methyl-2-pentanone (MIBK)	0.35 (BHRA)							

Table 2
Summary of VOC Data (mg/l) for Groundwater Samples
Beede Waste Oil / Cash Energy Site - Plaistow, New Hampshire

Notes:

1. Samples were collected by SHA personnel on the dates indicated. Monitoring wells with measurable levels of floating product (>0.01 ft) were not sampled during the December 1995 round. Results of analyses completed on samples collected in December 1995 round are shaded.

2. Analyses were completed by Eastern Analytical, Inc. (EAI) of Concord, New Hampshire for VOCs using EPA Method 8260.

3. Concentrations are presented in milligrams per liter (mg/l) which are equivalent to parts per million (ppm).

4. A blank indicates the compound was not detected. Only those VOCs detected in one or more groundwater samples are listed.

5. Standard detection limits for VOCs are 0.001 to 0.05 mg/l, depending on the compound. Detection limits are elevated by a factor proportional to the dilution factor in samples with elevated VOC concentrations. Refer to the analytical laboratory data reports for specific detection limits.

6. Methyl tertiary butyl ether (MTBE) is included with the total concentration of non-chlorinated aromatic VOCs.

7. Ambient Groundwater Quality Standards (AGQS) are from New Hampshire Code of Administrative Rules Env-Ws 410 (2/11/93). The sources of the AGQSs include:

   - Maximum Contaminant Level (MCL) established by the United States Environmental Protection Agency (USEPA);
   - Lifetime Health Advisory (LHA) established by the USEPA;
   - Health Advisory Level established by the New Hampshire Department of Health and Human Services, Division of Public Health Services, Bureau of Health Risk Assessment (BHRA);
   - USEPA 10^{-6} carcinogenic risk level (EPA 10^{-6}); and
   - "NA" indicates no AGQS established by NHDES

8. "*" indicates AGQS is for total xylenes (o, m, and p).

9. "**" indicates AGQS is for total trihalomethanes (THMs).

10. VOC concentrations in groundwater which equal or exceed the AGQSs are in ***bold italics***.

11. "HM" - Howard Manor overburden well.
    "HR" - Howard Residence overburden well.
    "OW-1" - Trip blank provided by EAI.

Table 3
Summary of VOC Data (ppm) for Surface Water and Sediment Samples
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Location	SW-1		SS-1	SW-2		SS-2	SW-4		SS-4
VOC Dilution Factor	1		1	1		1	1		1
Date of Sample	6/20/95	12/19/95	6/20/95	6/20/95	12/19/95	6/20/95	6/20/95	12/19/95	6/20/95
Benzene	ND	ND	ND	ND	0.002	ND	0.008	ND	ND
sec-Butylbenzene	ND	ND	ND	0.002	ND	0.02	ND	ND	0.01
Ethylbenzene	ND	ND	ND	ND	0.009	ND	0.010	ND	0.03
Isopropylbenzene	ND	ND	ND	ND	0.002	ND	0.001	ND	0.01
p-Isopropyltoluene	ND	ND	ND	ND	0.002	ND	ND	ND	ND
Naphthalene	ND	ND	ND	0.001	0.009	ND	0.003	ND	0.04
n-Propylbenzene	ND	ND	ND	0.001	0.003	ND	0.002	ND	0.02
Toluene	ND	ND	ND	0.005	0.004	0.01	0.001	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	0.018	ND	0.004	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	0.012	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND	0.011	ND	0.005	ND	ND
m,p-Xylene	ND	ND	ND	ND	0.012	ND	0.004	ND	ND
Total Non-Chlorinated Aromatic VOCs	ND	ND	ND	0.009	0.084	0.03	0.038	ND	0.11
Chlorobenzene	ND	ND	ND	ND	ND	ND	0.060	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	0.005	ND	0.002	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	0.002	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	0.006	ND	0.007	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.02
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chlorinated VOCs	ND	ND	ND	ND	0.013	ND	0.069	ND	0.02
C_{11}-C_{16} VPHCs	NA	NA	NA	NA	NA	5	NA	NA	2
2-Butanone (MEK)	ND	ND	ND	0.02	ND	ND	ND	ND	ND

Table 3
Summary of VOC Data (ppm) for Surface Water and Sediment Samples
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Location	SW-5		SS-5	SW-6	SS-6	SW-7	SW-8		SS-8
VOC Dilution Factor	1		1	1	1		1		1
Date of Sample	6/20/95	12/19/95	6/20/95	6/21/95	6/21/95	12/18/95	6/21/95	12/18/95	6/21/95
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Non-Chlorinated Aromatic VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	0.002	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	0.008	0.003	ND
Total Chlorinated VOCs	ND	ND	ND	ND	ND	ND	0.010	0.003	ND
C_{11}-C_{16} VPHCs	NA	NA	ND	NA	ND	NA	NA	NA	ND
2-Butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Summary of VOC Data (ppm) for Surface Water and Sediment Samples
Beede Waste Oil / Cash Energy Site
Plaistow, New Hampshire

Notes:

1. Samples were collected by SHA personnel on the dates indicated. Results of samples collected in the December 1995 round are shaded.

2. Analyses were completed by Eastern Analytical, Inc. (EAI) of Concord, New Hampshire using EPA Method 8260.

3. Concentrations are presented in milligrams per liter (mg/l) for surface water (SW-series) samples and milligrams per kilogram (mg/kg) for sediment (SS-series) samples, both of which are equivalent to parts per million (ppm).

4. "ND" indicates the compound was not detected. Only those VOCs detected in one or more samples are listed.

5. Refer to the analytical laboratory data reports for specific detection limits.

FIGURE

Figure 1 Exploration Location Plan

The on-line Figure for this report is provided as a separate Adobe Acrobat© file.

APPENDICES

Appendix A **Field Forms**

Appendix B **Analytical Laboratory Data Reports**

Appendices are not included in this on-line version.
Please contact the USEPA Region 1 Superfund Records Center for further information about this material.